

中国广西苦苣苔科一新种——灵川小花苣苔

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Chiritopsis lingchuanensis Yan Liu & Y. G. Wei, a new species of Gesneriaceae from Guangxi, China

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Abstract A new species of Gesneriaceae, *Chiritopsis lingchuanensis* Yan Liu & Y. G. Wei, which was found to grow in a karst cave in Lingchuan County, Guangxi, China, is described and illustrated. The new species is similar to *C. bipinnatifida* W. T. Wang in having cymes lax-flowered, the corolla white, distinctly 2-lipped, the posterior lip three times shorter than the anterior one, and the staminodes 3, but differs by having leaves undivided and stamens pubescent. The new species is also similar to *C. repanda* W. T. Wang in the leaf shape, but differs in its corolla indistinctly 2-lipped, the posterior lip subequal to the anterior one, stamens glabrous, and the staminodes 2.

Key words *Chiritopsis*, *Chiritopsis lingchuanensis* Yan Liu & Y. G. Wei, Gesneriaceae, new species, Karst cave, Guangxi, China.

摘要 报道了在广西岩溶洞穴发现的苦苣苔科Gesneriaceae小花苣苔属*Chiritopsis*一新种——灵川小花苣苔*C. lingchuanensis* Yan Liu & Y. G. Wei。本种因聚伞花序花稀疏，花冠白色，明显二唇形，上唇比下唇短3倍以上，退化雄蕊3而与羽裂小花苣苔*C. bipinnatifida* W. T. Wang相近，区别在于前者叶不裂，雄蕊被短柔毛。本种在叶形上还与小花苣苔*C. repanda* W. T. Wang相近，不同在于后者花冠不明显二唇形，上下唇近等长，雄蕊无毛，退化雄蕊2。灵川小花苣苔的分布范围狭窄，目前仅见于一个岩溶洞穴的近洞口段，具明显的洞生习性。

关键词 小花苣苔属；灵川小花苣苔；苦苣苔科；新种；岩溶洞穴；广西；中国

作者在最近的广西岩溶洞穴植物考察中，在灵川县的一个岩洞内采集到一种苦苣苔科Gesneriaceae小花苣苔属*Chiritopsis* W. T. Wang植物，并对其进行了野外定点观察和生物学特性调查。该植物在有关苦苣苔科植物论著(王文采, 1981, 1982, 1986, 1990, 1992; 刘晓龙, 郭新弧, 1989; 方鼎等, 1993; Wang et al., 1998; 李振宇, 王印政, 2004)中尚无记载，是一个未描述的新种。

灵川小花苣苔 新种 图1

Chiritopsis lingchuanensis Yan Liu & Y. G. Wei, sp. nov. Fig. 1

Species nova ob cymas laxifloras, corollam albam, bilabiatam, labium posticum eo antico circ. 3-plo brevius, staminodia 3 affinis *C. bipinnatifidae* W. T. Wang, quae foliis bipinnatifidis,

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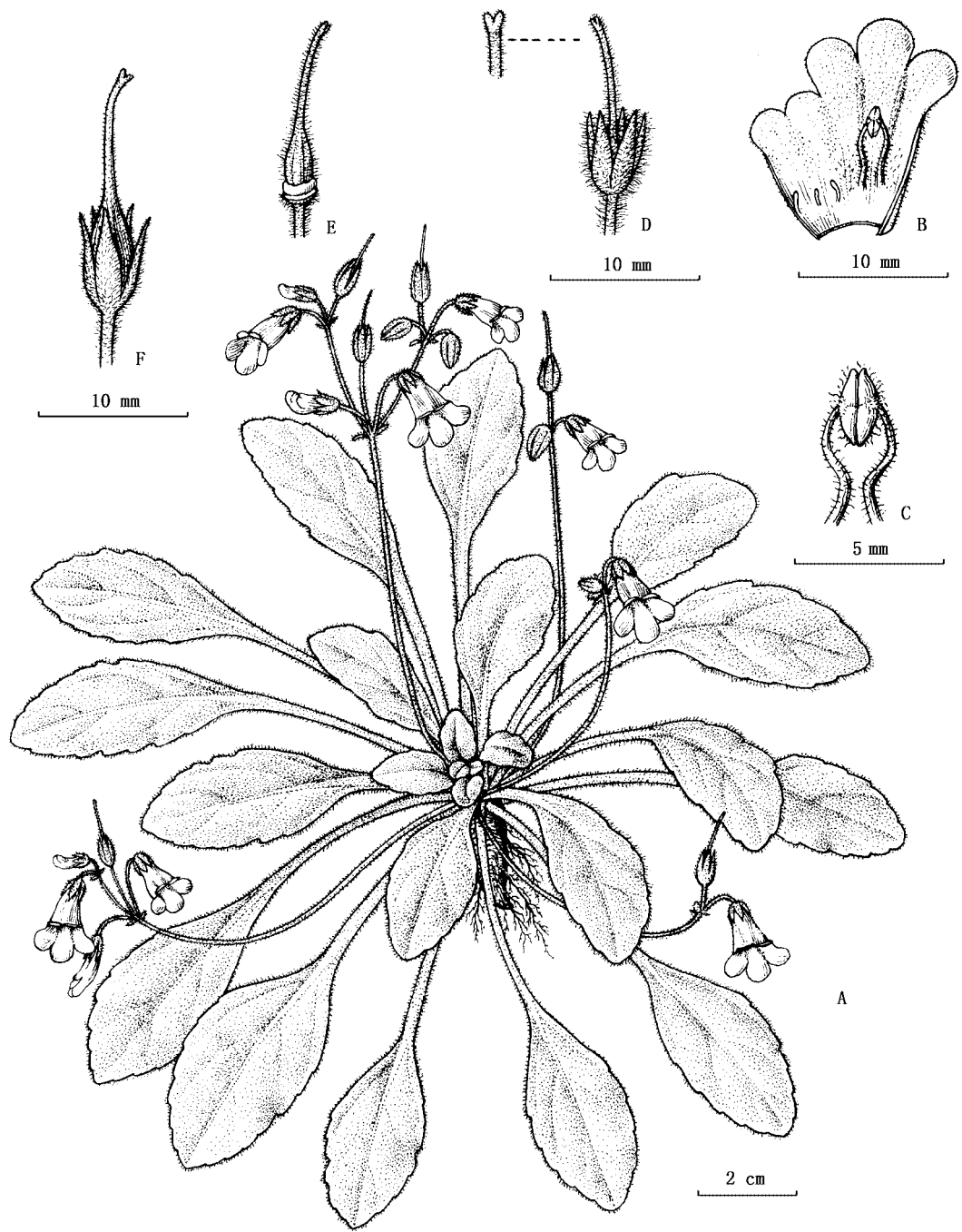


图1 灵川小花苣苔 A, 体态; B, 花冠、雄蕊和退化雄蕊; C, 雄蕊; D, 花萼及雌蕊; E, 花盘和雌蕊; F, 果。(何顺清根据刘演L1085号标本绘)

Fig. 1. *Chiritopsis lingchuanensis* Yan Liu & Y. G. Wei. A, habit; B, corolla opened with stamens and staminodes; C, stamens; D, calyx and pistil; E, disc and pistil; F, fruit. Drawn by S. Q. He from Yan Liu L1085.

staminibus glabris differt. Haec species forma folii etiam affinis *C. repandae* W. T. Wang, quae corolla inconspicue bilabiata, labio postico eo antico subaequilongo, staminibus glabris, staminodiis 2 differt.

Herba perennis, pusilla. Rhizoma teres 5–30 mm longum, apice 3–15 mm crassum. Folia 10–20, omnia basalia, longe petiolata; laminae tenuiter herbaceae, ovatae, anguste ovatae vel subellipticae, interdum inaequilaterales, 1.5–5.5 cm longae, 0.8–3 cm latae, apice obtusae vel rotundatae, basi in petiolum attenuatae vel late cuneatae, margine repandae vel remote repando-crenatae, utrinque densiuscule puberulae, nervis lateralibus utrinsecus 2–3 inconspicuis; petioli complanati, 1.5–8 cm longi, 1.5–4 mm lati, dense pubescentes. Scapi 3–10, graciles, 5–12 cm alti cum pedicellis villosuli; cymae semel vel bis ramosae, 2–12-florae; bracteae oppositae, lanceolatae, 2.5–5 mm longae, 0.5–1.5 mm latae, pubescentes; bracteolae bracteis similes, minores; pedicelli 5–15 mm longi, graciles. Calyx ad basin 5-sectus, segmentis lanceolato-linearibus 4–7 mm longis 0.5–2 mm latis apice acutis extus villosulis intus sparse pilosellis. Corolla alba, 13–16 mm longa, extus dense pubescens, intus sparse puberula, tubo crasse tubulari, limbo bilabiato 9–12 mm longo leviter purpurascenti ore 4–5 mm diam., labio postico circ. 1 mm longo ad basin 2-secto, lobis 2.5–3 mm latis, eo antico 3.5–5 mm longo ad medium 3-fido, lobis rotundato-ovatis 3–4 mm latis intus inter eos purpurello-striatis. Stamina 2, filamentis dense puberulis ad 2.6 mm supra basin corollae insertis 8–11 mm longis subulatis prope medium geniculatis pubescentibus, antheris circ. 2.5 mm longis, cohaerentibus, loculis divaricatis apice confluentibus connectivis puberulis. Staminodia 3, filiformia, ad 1.5–2 mm supra basin corollae inserta, circ. 1.5 mm longa, glabra. Discus annularis, circ. 1 mm altus, margine leviter undulatus. Ovarium ovoideum, 2–3 mm longum, 1.5–2 mm diam., dense pubescens, stylo 8 mm longo dense puberulo, stigmatibus bilobulato. Capsula longe ovoidea, 6–7 mm longa, 2–3 mm lata, dense puberula. Fl. Jun.–Sep. Fr. Jul.–Oct.

China. Guangxi (广西): Lingchuan (灵川), Dajing (大镜), in Karst cave, rare, alt. 340 m, 2004-06-08, *Yan Liu* (刘演) L0974 (IBK); the same locality, 2004-07-12, *Yan Liu* (刘演) L1005 (IBK); the same locality, 2004-08-14, *Yan Liu* (刘演) L1061 (IBK); the same locality, 2004-09-11, *Yan Liu* (刘演) L1085 (holotype, IBK; isotypes, IBK, PE).

多年生小草本。根状茎圆柱状，长5–30 mm，顶端粗3–15 mm。叶10–20枚，均基生，具长柄；叶片薄草质，卵形、狭卵形或近椭圆形，长1.5–5.5 cm，宽0.8–3 cm，先端钝或圆形，基部渐狭成柄或宽楔形，有时两侧不对称，边缘浅波状，有少数浅波状钝齿，两面均被稍密的短柔毛，侧脉每边2–3条，不明显；叶柄扁，长1.5–8 cm，宽1.5–4 mm，密被短柔毛。花萼3–10条，纤细，高5–12 cm，与花梗均被开展的柔毛；聚伞花序一回或二回分枝，每花序具2–12朵花；苞片对生，披针形，长2.5–5 mm，宽0.5–1.5 mm，被短柔毛，小苞片与苞片相似，较小；花梗长5–15 mm，纤细。花萼5裂达基部，裂片披针状条形，长4–7 mm，宽0.5–2 mm，先端尖，外面被短柔毛，内面疏被短柔毛。花冠白色，长13–16 mm，外面密被短柔毛，内面疏被微柔毛；筒粗筒状，檐部二唇形，长9–12 mm，稍带紫色，口部直径4–5 mm；上唇长约1 mm，2裂达基部，裂片宽2.5–3 mm；下唇长3.5–5 mm，3中裂，裂片卵圆形，宽3–4 mm，内面之间各具一条淡紫色条纹。雄蕊2枚，生于花冠基部之上2.6 mm处，花丝长8–11 mm，钻形，近中部处膝状弯曲，被短柔毛，花药长约2.5 mm，连着，药室极叉开，顶端汇合，药隔被短柔毛；退化雄蕊3，丝状，花丝着生于距花冠基部1.5–2 mm处，长约1.5 mm，无毛。花盘环状，高约1 mm，边缘浅波状。子房卵球形，长2–3 mm，

直径1.5–2 mm, 密被短柔毛, 花柱长8 mm, 密被短柔毛, 柱头2浅裂。蒴果长卵形, 长6–7 mm, 粗2–3 mm, 密被短柔毛。花期6–9月。果期7–10月。

本种因花稀疏, 花冠白色, 明显二唇形, 上唇比下唇短3倍以上, 退化雄蕊3而与羽裂小花苣苔 *C. bipinnatifida* W. T. Wang相近, 但在羽裂小花苣苔, 叶二回羽状深裂, 雄蕊无毛。本种叶形态与小花苣苔 *C. repanda* W. T. Wang相近, 但在小花苣苔, 花冠不明显二唇形, 上下唇近等长, 雄蕊无毛, 退化雄蕊2。

灵川小花苣苔目前仅见于广西灵川县的一个岩溶洞穴内。该洞穴位于山脚的洼地边缘, 洞口高约20 m, 宽26 m, 洞深约80 m, 由洞口往洞内倾斜向下, 底部与地下河相连, 顶部岩壁常年滴水。洞内岩石上苔藓植物发育极好, 其他附生植物主要有尖舌苣苔 *Rhynchoglossum obliquum* Bl.、秋海棠 *Begonia grandis* Dry.、1种唇柱苣苔 *Chirita* sp.植物等。灵川小花苣苔主要生于洞穴近洞口段陡峭的石壁及由洞穴顶部悬垂下的石钟乳上, 呈零星或多株聚集分布, 几无伴生植物。由洞口向内, 植株渐少, 个体也较小。据初步统计, 该居群个体总数不足100株。

小花苣苔属为我国特有属, 目前已发现10种2变种。其中休宁小花苣苔 *Chiritopsis xiuningensis* X. L. Liu & X. H. Guo产于安徽, 与其他种类呈间断分布, 钻丝小花苣苔 *C. subulata* W. T. Wang、阳春小花苣苔 *C. subulata* var. *yangchunensis* W. T. Wang和密小花苣苔 *C. confertiflora* W. T. Wang产于广东, 其余种类, 即羽裂小花苣苔、心叶小花苣苔 *C. cordifolia* D. Fang & W. T. Wang、紫腺小花苣苔 *C. glandulosa* D. Fang, L. Zeng & D. H. Qin、灵川小花苣苔、浅裂小花苣苔 *C. lobulata* W. T. Wang、密毛小花苣苔 *C. mollifolia* D. Fang & W. T. Wang、小花苣苔和桂林小花苣苔 *C. repanda* var. *guilinensis* W. T. Wang均为广西岩溶地区特有种。广西—广东的岩溶地区显然是本属的分化中心和现代分布中心。

据野外观察, 小花苣苔属植物具有明显的洞生习性, 尤喜生于洞穴近洞口段弱光带 (twilight zone) 阴湿的石壁上, 洞穴外潮湿、通风良好、光线为散射光的近似洞穴的环境偶见, 分布范围极窄。从生境特点和分布现状推测, 该属植物可能曾是广泛分布的种群, 由于生境改变而致使生境片段化甚至仅残存洞穴中, 并在长期的隔离和对洞穴特殊生境的适应中逐渐形成一些特化性状。引种栽培的结果表明, 如按常规的方法盆栽小花苣苔属植物, 大部分的植株在不到两年的时间内相继死亡, 存活者长势很差且不能正常开花结实, 也说明了该属植物的生长依赖于洞穴环境。在已报道的国产苦苣苔科植物中, 类似情况还见于报春苣苔 *Primulina tabacum* Hance(任海等, 2003)。

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